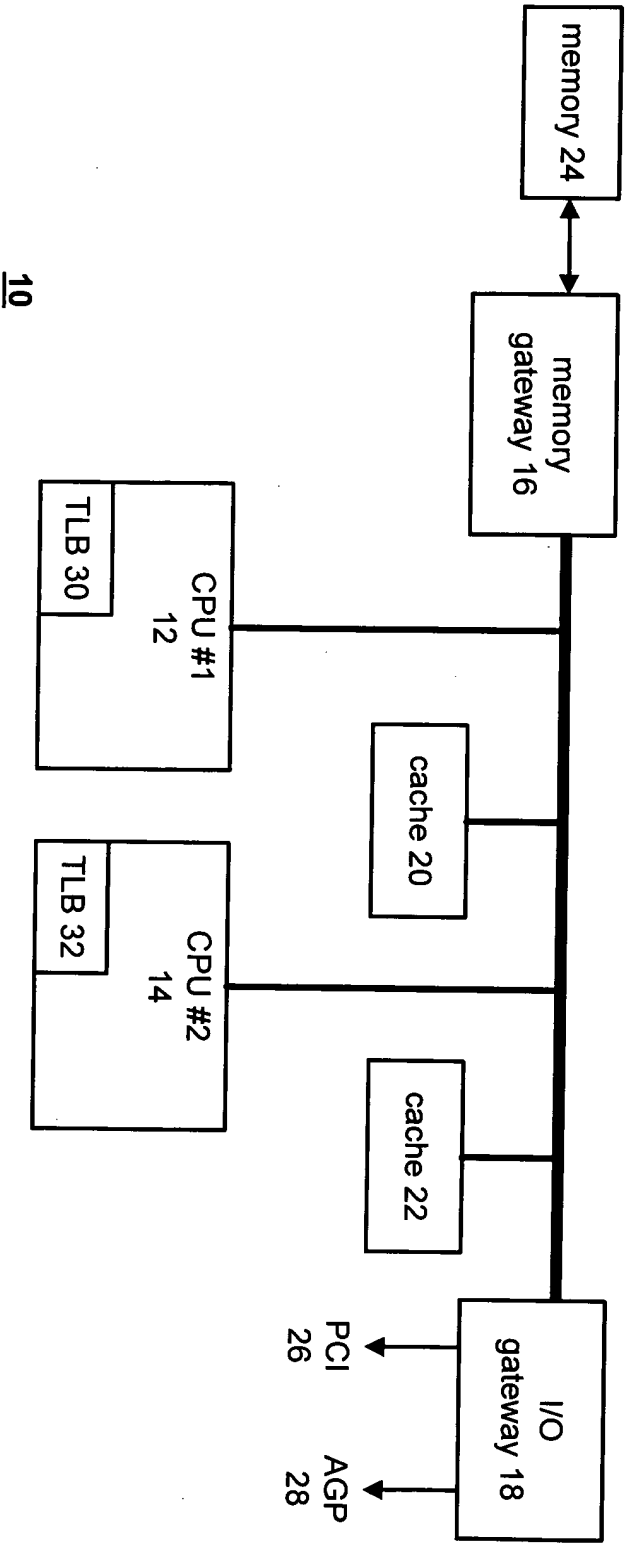
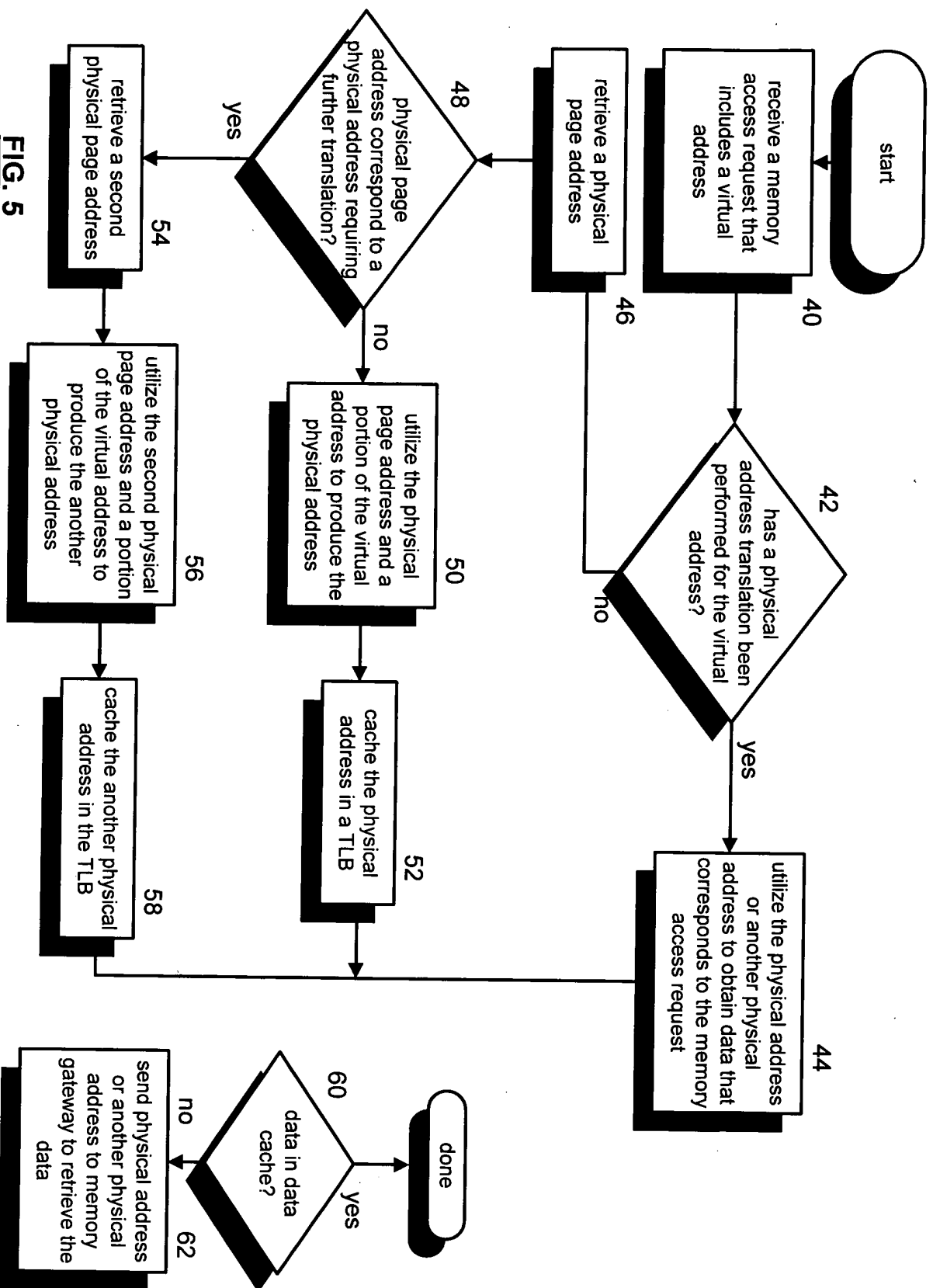


**FIG. 3**  
prior art

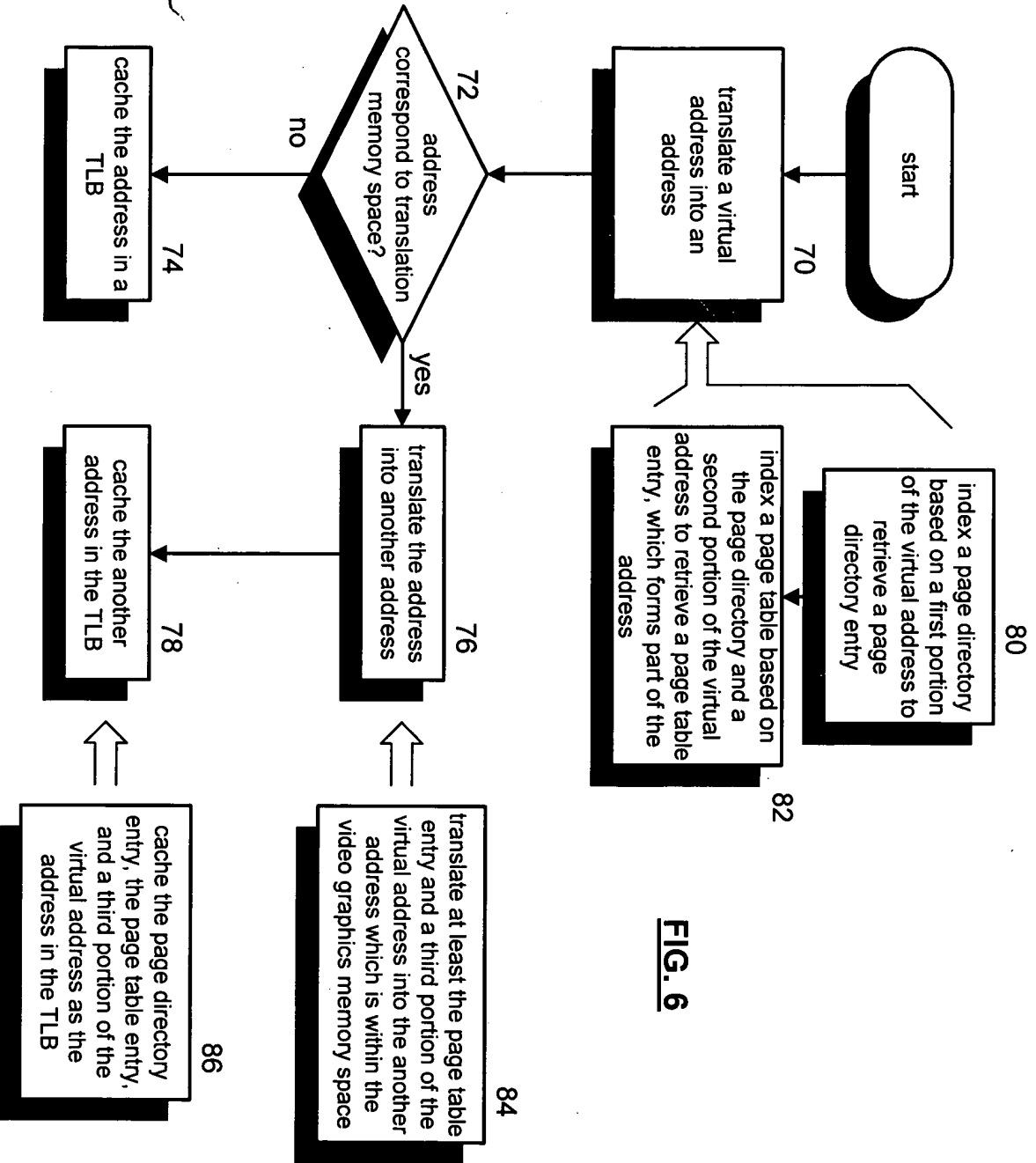
FIG. 3 is a flowchart illustrating a process for address translation and data retrieval. The process starts at a terminal 'start' and proceeds to a decision diamond 'is translated address in TLB?'. If the answer is 'yes', the process proceeds to a process block 'pass physical address to north bridge'. If the answer is 'no', the process proceeds to a process block 'index page directory to obtain a page directory entry (PDE)', then to a process block 'index page table based on PDE to obtain a page table entry (PTE)', and finally to a process block 'obtain physical address'. From 'pass physical address to north bridge', the flow enters another decision diamond 'phys. addr. in AGP window?'. If the answer is 'yes', the process proceeds to a decision diamond 'AGP translated addr. in GART TLB?'. If the answer is 'no', the process bypasses this and goes directly to a process block 'read memory'. From 'AGP translated addr. in GART TLB?', if the answer is 'yes', the process goes to 'read memory'; if 'no', it goes to a process block 'look up AGP translated address in GART table', which then leads to 'read memory'. The 'read memory' step leads to a process block 'send data to CPU'. Additionally, the 'obtain physical address' step leads to a decision diamond 'is data of phys. addr. cached?'. If the answer is 'yes', the process leads to a terminal 'done'; if 'no', it leads to 'read memory'.



**FIG. 4**



**FIG. 5**



**FIG. 6**